H·L Data Storage

Quick Set-up Guide

Blu-ray/DVD Writer

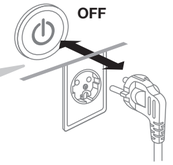
BH16

To install of your product, please read this guide manual carefully and completely.

MFL67902570

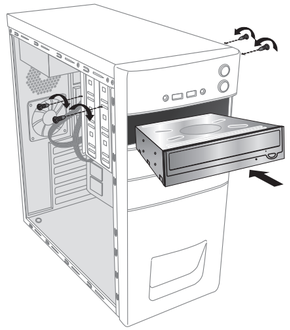
Installing the Drive

Before installing the drive, turn off the system power.



1

Disconnect the power cord, and remove the cover.

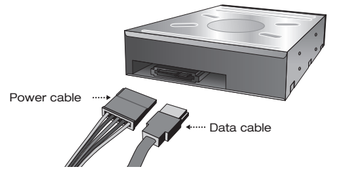


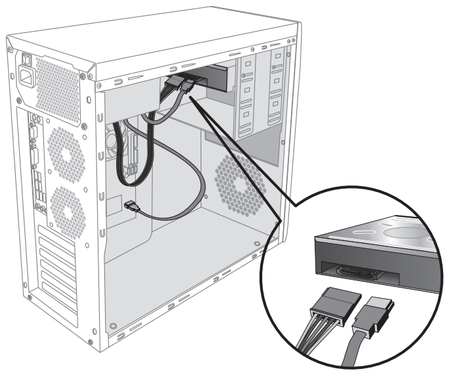
• Remove a vacant 5.25" drive bay panel from the computer. Slide the drive into the drive bay.

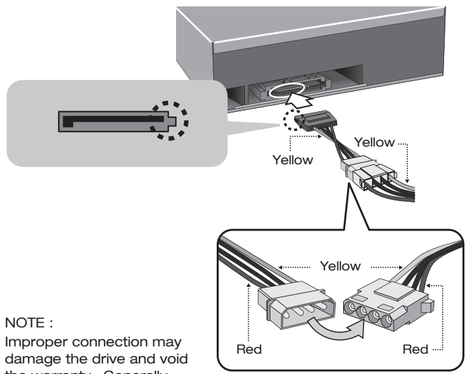
2

Connecting the SATA Power Cable.

• Connect the power cable so the projection of the cable connector side to come to the left side. Be careful not to connect upside down.

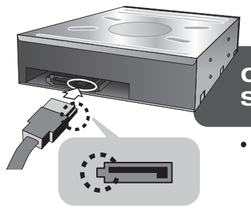






NOTE :
Improper connection may damage the drive and void the warranty. Generally, the power connector can only fit one way.

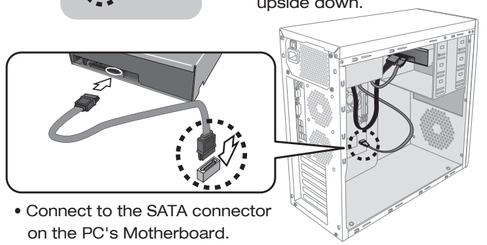
• Connect to the power connector of the PC.



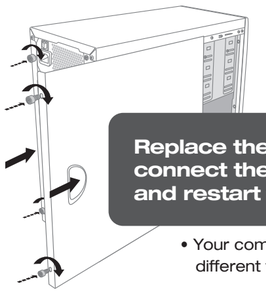
3

Connecting the SATA Data Cable.

• Connect the data cable. Be careful not to connect upside down.



• Connect to the SATA connector on the PC's Motherboard.

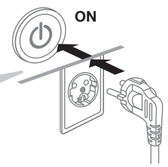


4

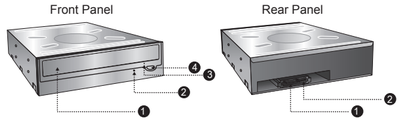
Replace the cover, connect the power cord and restart your computer.

• Your computer configuration may different from the illustrations.

Turn on the system power.



Location and Function of Controls



❶ Disc Tray
❷ Drive activity indicator
❸ Emergency Eject Hole
❹ Eject Button

❶ SATA Power Connector (15 pin)
❷ SATA Data Connector (7 pin)

System Environment - Operating Environment

This unit can be operated in the system environment explained here.

System requirements	• CPU : Intel Core 2 Duo E6750 (2.66 GHz), AMD Phenom 9450 (2.10 GHz) or above. • O/S : Windows 10, 8.1, 8, 7, Vista (32 bit, 64 bit), XP SP3. • RAM : 2 GB or more • HDD : Needed free space for Blu-ray Disc authoring (BD-R SL/DL: 60 GB, BD-R/RE XL(3 Layer): 100 GB, BD-R XL(4 Layer): 128 GB)
Interface	Serial ATA
Drive bay	13.34 cm (5.25-inch) half-height bay required
Power	+5V/+12V power socket required

Recommended media manufacturer	BD-R SL : Sony. BD-R DL : Panasonic. BD-R TL/ QL : Mitsubishi Kagaku Media, Sony. BD-R SL LTH : Taiyo Yuden. BD-RE SL : Mitsubishi Kagaku Media, Verbatim, Sony. BD-RE DL/TL: Mitsubishi Kagaku Media, Sony. DVD-R : Mitsubishi Kagaku Media. DVD-RW : JVC, Mitsubishi Kagaku Media, Verbatim. DVD+R : Mitsubishi Kagaku Media. DVD+RW : Mitsubishi Kagaku Media, Verbatim. DVD±R DL : Mitsubishi Kagaku Media. DVD-RAM : Panasonic. M-Disc (DVD+R SL, BD-R) : Millenniata. CD-R : Mitsubishi Kagaku Media, Verbatim, Taiyo Yuden. CD-RW : LG, Mitsubishi Kagaku Media, Verbatim.

* Compatibility problem in write/read function may occur with media depending on the media manufacturing quality.
Maximum write (or read) speed depends on system environments.
* There may be some cases when motion picture playback is not smooth depending on bit rate.
* Under Windows 8 operating system, a specific mainboard with nVidia GeForce 7025 Chipset may cause an abnormal operation.
* Please visit http://www.mdisc.com to learn more about the M-DISC™.

Playing Blu-ray Disc Movies *NOTICE*

	Graphic Card			Monitor		
	Driver	Interface	HDCP *2	Interface	HDCP	Resolution
Digital	AACS *1 Compliant	DVI or HDMI	Compliant	DVI or HDMI	Compliant	1024x768 or more (Recommended : 1920x1080)

Due to copyright protection features, certain requirements must be met in order to playback BD movies on a computer.
When using digital video connections, the monitor and graphics card must support High-bandwidth Digital Content Protection (HDCP). Note that most monitors and graphics cards currently don't support HDCP. But, most High Definition TVs and multimedia monitors do support HDCP. Refer to the PC or graphic card maker's web site to see if your card supports HDCP.
* Graphic Cards with following GPUs (Graphic Processing Unit) are recommended.
- Blu-ray Disc playback: Intel G45, ATA radeon HD 2400, nVdia GeForce 7600GT or above.
- 3D playback: Intel G45, ATA radeon HD 2400, nVdia GeForce 8800GT or above.
* When using ATI Radeon™ HD 1000 Series Graphic Card, some BLURAY movie title can not be played on Windows7 normally.
It caused by giving up supporting the device driver of this Graphic Card by ATI Radeon™.
For more information, Please contact to customer service center or website of ATI Radeon™.
*1 Graphic card driver shall meet AACS compliance criteria. Please consult your graphics card vendor for proper driver solution.
*2 HDCP(High Bandwidth Digital Content Protection): Required to view pre-recoded Blu-ray Disc which is copy protected.

Specifications

General	Supported Discs*1	BD-ROM(SL/DL), BD-RE*2(SL/DL/TL(3 Layer)), BD-R(SL/DL/TL(3 Layer)/QL(4 Layer)), BD-R (SL LTH), DVD-ROM(SL/DL), DVD-R(SL/DL), DVD-RW, DVD+R(SL/DL), DVD+RW, DVD-RAM, M-Disc(DVD+R SL, BD-R),CD-ROM, CD-ROM XA, CD-I, Photo-CD (Single & Multi-Session),Video CD, CD-Audio Disc, Mixed mode, CD-ROM disc (data and audio),CD-Extra, CD-Text, CD-R, CD-RW		
	Disc Diameter	12 cm/ 8 cm (8 cm disc can be used only with drive placed horizontally.)		
	Host Interface	Serial ATA		
	Mounting direction	Horizontal/Vertical		
Read/Write Speed *3	Media		Write :	Read :
	BD-ROM	SL/DL	-	12x/8x max.
	BD-R	SL	2x, 4x, 6x, 8x, 10x, 12, 16x	12x max.
		DL	2x, 4x, 6x, 8x, 10x, 12x	8x max.
		TL	2x, 4x, 6x, 8x	6x max.
		QL	2x, 4x, 6x	6x max.
		SL LTH	2x, 4x, 6x, 8x	8x max.
	BD-RE	SL	2x	10x max.
		DL	2x	6x max.
		TL	2x	4x max.
	DVD-ROM	SL	-	16x max.
		DL	-	12x max.
	DVD-R	SL	2x, 4x, 8x, 16x	16x max.
		DL	4x, 8x	12x max.
	DVD+R SL(M-DISC)		4x	12x max.
	DVD+R	SL	4x, 8x, 16x	16x max.
		DL	2.4x, 4x, 8x	12x max.
	DVD+RW		4x, 6x, 8x	12x max.
	DVD-RW		2x, 4x, 6x	12x max.
	DVD-RAM		2x, 3x, 5x	5x max.
	CD-R		8x, 16x, 24x, 32x, 40x, 48x	48x max.
	CD-RW		4x, 10x, 16x, 24x	40x max.
	CD-ROM		-	48x max.
	CD-DA(DAE)		-	40x max.
	80 mm CD		-	11.5x max.

Performance	Data transfer rate *Sustained	BD: 71.92 MB/s (16x max) DVD: 22.16 MB/s (16x max) CD: 7.2 MB/s (48x max)	
	*Burst(ATAPI)	SATAGen.1 (1.5 Gbps)	
	Average Access Time (1/3 Stroke)	BD-ROM : 180 ms (typ.), DVD-ROM : 160 ms (typ.) DVD-RAM : 180 ms (typ.), CD-ROM : 150 ms (typ.)	
	Buffer capacity	4 MB	
	MTBF	100,000 Power On Hours (Duty Cycle 20 %)	
Environmental Level	When operating	Temperature: 5 °C to 45 °C	Humidity: 15 % to 80 % R.H.
	When not operating	Temperature: -30 °C to 60 °C	Humidity: 10 % to 90 % R.H.

*1 The disc of the cartridge type is not supported.
*2 BD-RE: The disc of version 1.0 is not supported.
*3 There might be some cases when this drive can not satisfy the best performance depending on the conditions of the disc, the drive, and the recording format.
* The drive's appearance and specifications may change without prior notice.

Software

Install the appropriate CD Recording Authoring Software before using this unit.
* Please uninstall any previous CD burning software you may have loaded on your PC in order to prevent possible compatibility issues.
Once you have installed the application software, you may (if you wish) begin to reinstall previous software, taking note for errors.
We recommend using the drive with the latest software as some problems encountered when using the drive can be solved by updating the software.

Worldwide corporate site : http://www.hlds.co.kr

Safety Instructions

⚠ CAUTION : The laser used in the Writer can damage your eyes. Do not attempt to open the cover. To reduce the risk of electric shock, do not remove the cover (or back). There are no user-serviceable parts inside. Refer servicing to qualified service personnel. Use of controls or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ WARNING : To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

⚠ VORSICHT : Der in diesem Laufwerk benutzte Laser kann Ihre Augen schädigen. Versuchen Sie keinesfalls, die Abdeckung zu öffnen. Um die Gefahr eines elektrischen Schocks zu reduzieren, sollten Sie die Abdeckung (oder Rückseite) keinesfalls entfernen. Im Inneren des Geräts befinden sich keine Teile, die vom Benutzer selbst gewartet werden können. Überlassen Sie die Wartung qualifizierten Kundendiensttechnikern. Beachten Sie bei der Benutzung von Bedienelementen und der Durchführung von Prozeduren unbedingt die Anweisungen dieses Handbuchs, da andernfalls gefährliche Strahlung freigesetzt werden kann.

⚠ WARNUNG : Setzen Sie das Laufwerk keinesfalls Regen oder Feuchtigkeit aus, um die Gefahr eines Brandes oder elektrischen Schocks zu reduzieren.

⚠ ATTENTION : Le faisceau laser utilisé dans ce graveur est dangereux pour les yeux. Ne pas tenter d'ouvrir le couvercle. Ne déposer ni la façade, ni le panneau arrière (risque d'électrocution). Aucun élément interne n'est réparable par l'utilisateur. L'utilisation de commandes ainsi que l'exécution de procédures autres que celles spécifiées dans le présent guide risque de provoquer une dangereuse exposition aux radiations.

⚠ AVERTISSEMENT : Ne pas exposer ce matériel à la pluie ou à l'humidité (risques d'incendie et d'électrocution).

⚠ PERICOLO : Il dispositivo di lettura e scrittura utilizzato in questo masterizzatore utilizza un raggio laser che, se osservato da vicino, può danneggiare la vista. Evitare di smontare il coperchio dell'apparecchio. Al fine di prevenire eventuali folgorazioni, evitare di smontare l'apparecchio. All'interno dell'apparecchio non sono presenti parti che richiedono manutenzione da parte dell'utente. In caso di difetti o guasti, rivolgersi ad un Centro di Assistenza Tecnica. L'esecuzione di procedure diverse da quella espressamente indicate in questo manuale può provocare pericolose esposizioni alle radiazioni laser.

⚠ ATTENZIONE : Al fine di evitare cortocircuiti o principi di incendio, evitare di esporre questo apparecchio alla pioggia o ad una eccessiva umidità ambientale.

⚠ PRECAUCION : El láser utilizado en la unidad puede dañar sus ojos. No intente abrir la tapa. Para reducir el riesgo de descarga eléctrica, no quite la tapa (ni la parte posterior). No hay piezas internas que deba mantener el usuario. El servicio de mantenimiento debe efectuarlo personal técnico cualificado. El uso de controles o la ejecución de procedimientos distintos de los especificados en este manual pueden ser causa de exposición a radiación peligrosa.

⚠ ADVERTENCIA : Para reducir el riesgo de fuego o descarga eléctrica, no exponga este aparato a la lluvia ni a la humedad.

⚠ CUIDADO : O laser utilizado no Gravador pode provocar danos nos seus olhos. Não tente abrir a tampa. Para reduzir os riscos de choques eléctricos, não retire a tampa (nem o painel posterior). Não existem peças ajustáveis pelo utilizador no interior do aparelho. Solicite a assistência de pessoal qualificado para quaisquer trabalhos de reparação. A utilização dos comandos ou a execução de procedimentos para além dos especificados neste manual podem resultar numa exposição perigosa às radiações.

⚠ AVISO : Para reduzir o risco de incêndio ou choque elétrico não exponha este aparelho á chuva ou humidade.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT
CLASE 1	PRODUCTO LÁSER
CLASSE 1	PRODOTTO LASER

CAUTION : CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.
ADVARSEL : KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL : KLASSE 3B SYNLING OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPENS. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING : KLASSE 3B SYNLING OCH OSYNLIG LASERSTRÅLNING NÄR DENNAL DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
VARO! : KURSSI 3B NÄKYVÄ JA NÄKYMÄTÖN AVATTAESSA OLET ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEN.

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■ The company names and product names written in this manual are trademarks or registered trademarks of the respective companies.
■ The appliance is not intended for use by young children or infirm persons without supervision.
■ Please pay attention to handling Electrostatic Sensitive Devices, you may use anti-static products such as wrist straps, heel straps, mats to protect your body from electrostatic.

Caution!

The disc rotates at high speed in the drive unit. Use of worn, damaged, or non-standard discs can adversely affect the drive and cause the disc to shatter or crush while in use. Disc crush can only occur when you use a damaged disc in the drive. It is an extremely rare occurrence, but there are steps which can be taken to prevent it.

Always check your discs before inserting them into the drive.
1. Take care not to use worn, cracked, damaged, warped or poor quality discs, as this may cause damage to your drive.
2. Check the clear plastic on the center of the disc, cracks here are the main cause of disc crush.
3. Do not play discs which are a non-standard (I.e. non-circular)shape, such as heart shaped discs, or discs in the shape of a business card.

How can you keep your discs from becoming damaged?
1. When not in use, remove discs from the drive.
2. Keep discs in the packaging supplied with them and out of direct sunlight and away from heat sources.

Excessive vibration or a sudden jolt to the drive during operation may cause a malfunction. Avoid exposing the drive to sudden changes in temperature as it may cause condensation to collect inside the drive.